St Michael's CE Primary School

	Master Practical Techniques			Take Inspiration from Design	Design, Make, Evaluate and Improve	Communicate with the Vocabulary of Design Technology
	Materials	**Structures and Mechanisms**	**Food and Nutrition**			
Early Years Milestone- Milestone 1a-Class 1	• I can safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • I can begin to cut materials safely using tools provided. • I can begin to measure and mark out in centimetres. • I can begin to use a range of cutting and shaping techniques.	• I can use a range of small tools, including scissors, paintbrushes and cutlery. • I can begin to explore ways products can be made stronger. • I can create a product using a lever.	• I can begin to cut, peel and grate ingredients safely. • I can begin to measure or weigh using measuring cups or electronic scales. • I can assemble and cook ingredients.	• I can explore how things work • I can begin to explore objects and designs to identify likes and dislikes. • I can begin to suggest improvements to existing designs. • I can begin to explore how products have been created.	• I can share my creations, explaining the process I have used • I can create collaboratively, sharing ideas, resources and skills • I can begin to design products that have a clear purpose and an intended user. • I can begin to make products, refining the design as work progresses. • I can begin to use software to design.	• plan, design, investigate • make, cut, join • chop, slice, taste • planning, investigating design, evaluate, make, user, purpose, ideas, product • slicing, peeling, cutting, healthy diet, ingredients • finish, sew, template, mark out • slider, lever, pivot, slot, bridge/guide, join, pull, push, up, down, straight, curve, forwards, backwards
Milestone 1b –Class 2	• I can cut materials safely using tools provided. • I can measure and mark out to the nearest centimetre. • I can demonstrate a range of cutting and shaping techniques.	• I can explore a range of ways products can be made stronger. • I can create a product using wheels and winding mechanisms.	• I can cut, peel and grate ingredients safely. • I can measure or weigh using measuring cups or electronic scales. • I can assemble and cook a range of ingredients, and discuss my choices.	• I can explore objects and designs to confidently identify likes and dislikes. • I can suggest some improvements to existing designs. • I can explore how products have been created.	• I can design products that have a clear purpose and an intended user. • I can make products, refining the design as my work progresses. • I can use software to design.	• investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function • soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, ingredients • template, pattern pieces, mark out, join, decorate, finish • vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism, tools, equipment, materials

Milestone 2-Class 3	• I can begin to cut materials accurately and safely by selecting appropriate tools. • I can begin to measure and mark out to the nearest millimetre. • I can begin to apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material. • I can begin to select appropriate joining techniques.	• I can begin to use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product. • I can begin to choose suitable techniques to construct products or to repair items. • I can begin to strengthen materials using suitable techniques.	• I can begin to prepare ingredients hygienically, using the appropriate utensils. • I can measure ingredients to the nearest gram, with support. • I can follow a simple recipe.	• I can begin to identify some of the great designers to generate ideas for designs. • I can begin to improve upon existing designs, suggesting some reasons. • I can disassemble products to begin to understand how they work.	• I can begin to design with a purpose, identifying some opportunities for design. • I can make products by beginning to work efficiently. • I can begin to refine my work and techniques, by evaluating what I am doing.	• user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing • equipment, utensils, technique, ingredients, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, fresh, savoury, hygienic, edible, grown, frozen, tinned, processed • fabric, fastening, compartment, button, structure, finishing technique, templates, stitch, seam, seam allowance • frame structure, three-dimensional, marking out, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong

	Master Practical Techniques				Take Inspiration from Design	Design, Make, Evaluate and Improve	Communicate with the Vocabulary of Design Technology
	Materials	**Electrics and Computing**	**Structures and Mechanisms**	**Food and Nutrition**			
Milestone 2-Class 3	• I can cut materials accurately and safely by selecting appropriate tools. • I can measure and mark out to the nearest millimetre. • I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material. • I can select appropriate joining techniques.	• I can create products with series and parallel circuits.	• I can use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product. • I can choose suitable techniques to construct products or to repair items. • I can strengthen materials using suitable techniques.	• I can prepare ingredients hygienically, using the appropriate utensils. • I can measure ingredients to the nearest gram. • I can follow a recipe. • I can assemble and cook ingredients.	• I can identify some of the great designers in all areas of study, to generate ideas for my designs. • I can improve upon existing designs, providing reasons for my choices. • I can disassemble products to understand how they work.	• I can design with a purpose, identifying opportunities for design. • I can make products working efficiently. • I can refine my work and techniques, by continually evaluating what I am doing.	• evaluating, design brief, design criteria, innovative, prototype, user, purpose, function, appealing, planning, annotated sketch, sensory evaluations • products, equipment, utensils, technique, ingredients, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy, varied, diet • shell structure, length, width, breadth, marking out, adhesives, joining, assemble, accuracy, material, stiff, strong • series circuit, fault, connection, switch, control, LED, conductor

Milestone 3 Class 4	• I can begin to cut materials with precision, and refine the finish using appropriate tools. • I can begin to show an understanding of the qualities of materials in order to select appropriate tools to cut and shape them. • I can cut materials with precision, and refine the finish using appropriate tools. • I can demonstrate an understanding of the qualities of materials in order to select appropriate tools to cut and shape them.	• I can create products using electronic kits that employ a number of components.	• I can begin to develop a range of practical skills to create products. • I can use innovative combinations of electronics and mechanisms in product designs. • I can develop a range of practical skills to create products. • I can convert linear motion to rotary using cams.	• I can begin to understand the importance of correct storage and handling of ingredients. • I can begin to measure accurately and calculate rations of ingredients. • I can begin to demonstrate a selection of baking and cooking techniques. • I can begin to create and refine recipes; including ingredients, methods, cooking times and temperatures. • I can understand the importance of correct storage and handling of ingredients. • I can measure accurately and calculate rations of ingredients, including scaling up or down. • I can demonstrate a selection of baking and cooking techniques. • I can create and refine recipes; including ingredients, methods, cooking times and temperatures.	• I can begin to combine elements of design from a range of inspirational designers throughout history, suggesting some reasons for my choices. • I can begin to create innovative designs that improve upon existing products. • I can evaluate my design, and begin to suggest improvement to the user experience. • I can combine elements of design from a range of inspirational designers throughout history, giving reasons for my choices. • I can create innovative designs that improve upon existing products. • I can evaluate my design, in order to suggest improvement to the user experience.	• I can begin to design with the user in mind, considering the service a product will offer. • I can begin to make products using stages of prototypes, making continuing refinements. • I can begin to ensure that products have a high-quality finish, using artistic skills where appropriate. • I can begin to use prototypes and cross-sectional diagrams to represent designs. • I can design with the user in mind, motivated by the service a product will offer. • I can make products using stages of prototypes, making continual refinements. • I can ensure that products have a high-quality finish, deploying artistic skills where appropriate. • I can begin to use prototypes, cross-sectional diagrams and computer-aided designs to represent designs.	• design decisions, functionality, authentic, user, purpose, specification, brief, innovative, research, evaluate, criteria, annotate, mock-up, prototype, evaluate, improve • ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality, utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble • shell structure, stiffen, strengthen, reinforce, stability, shape, join, temporary, permanent • axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, battery, battery holder, wire, insulator • function, innovative, specification, brief, user, purpose, brief, prototype, annotated sketch, purpose, user, research, functional, mock-up, evaluate, improve • ingredients, products, equipment, utensils, technique, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy, varied, diet, source, origin, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, cook, temperature • transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output, LED, bulb, bulb holder, battery, battery holder • cam, pulley, lever, mechanism, rotation, spindle, axle, driver, follower, annotated drawings, exploded diagrams